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AUTHOR Flora, June A.
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ABSTRACT

The primary purpose of this paper is to describe strategies for enhancing the health behavior of adolescents and their families through increasing the healthfulness of the media environment, particularly radio or the music industry. A second goal is to briefly describe research that would enhance understanding of the healthfulness of the media environment and its potential influences on adolescent behavior. Several influence strategies for improving the healthfulness of media effects on adolescent behavior are grouped according to target. Targets include individual, group, institution, and community. Discussion explores: (1) the process of influencing adolescents directly through health campaigns; (2) saturation of the media; (3) the tailoring of messages; (4) supplementation of media messages; (5) application of theory and use of formative research in campaigns; (6) specification of behavior change objectives; (7) application of theory; (8) formative research; (9) program evaluation; (10) the process of influencing adolescent health indirectly; (11) exchange among media, health, and development professionals; (12) the process of influencing media and educational institutions; (13) cooperative consultation; (14) media advocacy; (15) curricula change in training institutions; (16) the process of influencing society to support adolescent health; (17) and implications for research. A total of 42 references are cited. (RH)

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CARNEGIE COUNCIL ON
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STRATEGIES FOR ENHANCING ADOLESCENTS' HEALTH THROUGH MUSIC MEDIA

June A. Flora

A commentary on Popular Music in Early Adolescence
by Peter G. Christenson and Donald F. Roberts

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This commentary was prepared in connection with a commissioned paper on popular music in early adolescence by Peter G. Christenson and Donald F. Roberts for the Carnegie Council on Adolescent Development.

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June A. Flora
Institute for Communication Research &
Stanford Center for Research in Disease Prevention
Building 120, Room 110
Stanford University
Stanford, CA 94305-2050

The primary purpose of this paper is describe strategies to enhance the health behavior of adolescents and their families through increasing the "healthfulness" of the media environment. A secondary goal of this paper is to briefly describe research that would enhance our understanding of the healthfulness of the media environment and its potential influences on adolescent behavior.

I will identify eight strategies, each distinguished from one another by their target of influence: adolescent behavior, relevant groups (such as families and health professionals), institutions, and entire communities (see Table 1, page 23). The paths to achieving adolescent health may be direct--placement of radio PSA's advocating health behavior--or indirect--increased parent-child communication about media influences which may in turn inoculate teens against the unhealthful messages found in music media.

Several of these strategies have been applied in radio or the music industry. All have been applied in television. While the application of these strategies is new for most music media, the methods are similar across all media. The purpose here is to describe how television-oriented change strategies could be applied to radio or the music industry.

While the long-term outcomes of all influence strategies is the enhancement of adolescent health, the short terms outcomes are varied and include retention and learning by listeners/viewers,

increased amount and quality of health-oriented content in programming, enhanced family communication about media content, modification of the creative treatment of adolescents and health in radio and music industry programming, and approval of policies regulating content and time devoted to health-related issues in the media.

The eight influence strategies are presented as a framework for improving the healthfulness of media effects on adolescent behavior. No one approach is sufficient to bring about an idealized situation where adolescents can select from a large array of healthful programs, health messages abound in the public media, social well being is integrated into all forms of entertainment, and all segments of the population have access to a medium that strives to meet their needs. A comprehensive approach to change, combining both short and long term strategies at all levels of society may provide the necessary and sufficient conditions for us to save our youth from the hazards of substance use, other unhealthful habits, maladaptive behaviors, illiteracy, and marginalization.

Influencing adolescents directly through health campaigns

What makes campaigns successful? Research on media effects suggests that successful media-based health programs share certain commonalities. Three characteristics of successful programs were articulated by Lazarsfeld and Merton (1948), who state that at least one of these characteristics must be present to achieve a

successful outcome. These characteristics are (1) saturation of the media with health messages, (2) development of messages targeting audience needs, and (3) supplementation of media messages. Experience and communication research since the 1940's indicates that supplementation of media may be the most important factor for behavior change. Most successful campaigns are characterized by all three of the following strategies (Flay, 1987; Flora, Maccoby, & Farquhar, 1989).

Saturation of the Media. The campaign planner must be successful not only at getting messages "on the air" but also at achieving appropriate placement and frequent play of those messages. In addition, it is important to minimize contradictory messages (Lazarsfeld & Merton, 1948). On a practical level, monopolizing health issues in any media environment is an impossible task. However, good public relations with media gatekeepers may yield strategies for leveraging optimal message placement and frequency of play and, ideally, reducing the play of unhealthy messages for a period of time. Media gatekeepers are often sensitive to arguments about the need to achieve a balance of healthful and unhealthy messages. Perquisites for achieving a goal of saturation include cooperative relations between the health agency and media gatekeepers, agency representatives who understand the organizational needs, and campaign planners who are knowledgeable about message design and evaluation.

Breaking the monopoly of unhealthful messages is indeed a lofty goal, one that involves long-term planning. Yet, it is a goal

worth striving for. At the community level, media organizations can screen or restrict the type of advertising they accept, they can produce and air healthy messages to inoculate viewers against persuasive unhealthy ads, they can integrate healthful messages into the news, entertainment programming, editorials, community calendars, commentary, and they can provide optimal air times for health messages (Wallack, 1989).

While these goals seem unrealistic in the short term, many media organizations have already begun to establish these practices. One radio station in San Diego screens the content of alcohol advertising to insure that drinking is not associated with activities that could lead to accidents (e.g., boating, sports) (Durazzo, Flora, & Foote, 1987). Some magazines do not accept cigarette advertisements, for example, Readers Digest and Good Housekeeping (Richards, 1987). Many television stations do not play alcohol advertisements during the early daytime hours, in order to limit children's exposure. These steps illustrate small solutions to the problem of an over abundance of unhealthful messages in ads, entertainment, and other programming.

Tailoring messages. Message tailoring refers to designing messages that build on audiences' existing beliefs and attitudes (Lazarsfeld & Merton, 1948). Message design techniques used to develop effective messages include:

(1) Specifying the target audience (e.g., Hispanic women, women who work, families with young children, smokers motivated to quit),

(2) Identifying the communication patterns of the target audience

(i.e., what television programs, radio stations, newspapers read, magazines, newsletters are watched, listened to and read by the audience),

(3) Investigating how target audience members use the media (e.g., for information, entertainment, or stress reduction) and determine their health interests, motivations, knowledge, and behaviors,

(4) Segmenting audiences into homogeneous subgroups based on characteristics pertinent to behavior change, for example, past behavior, perceived self-efficacy, behavioral intentions, perceived social norms, attitudes, outcome expectations, and demographics,

(5) Using formative research techniques (e.g. focus groups and interviews) to develop message concepts, and

(6) Pretesting the drafts of messages with members of the target audience.

Incorporation of these steps into health promotion planning increases the likelihood that the message will reach the targeted audience and stimulate the advocated behaviors and attitudes.

Supplementation of media messages. Supplementation broadly defined is the simultaneous or sequential use of two or more media to disseminate a single message. In its simplest form, messages may be presented simultaneously in two media, perhaps briefly covered in one and extensively in another. In a recent successful example, a smoking cessation program aired on television news was supplemented with curricula in schools for adolescents and printed quitting materials for families (Brannon et al., 1989). Most often media messages are supplemented by face to face, phone, or print

interventions. Classes, contests, support groups, clinics, telephone hot lines, and printed materials are all examples of media supplements. Supplementation extends the amount of time devoted to learning about health topic, increases the amount of information, provides additional information (e.g., feedback about behavior and responses to individual needs), and can provide individualized reinforcement for maintenance of change (Flay and Burton, 1989; Maccoby & Solomon, 1981; Puska et al., 1981; Sallis et al., 1986).

One drawback to the development and implementation of supplementary activities is the time required for planning. Most locally initiated campaigns do not allocate time for the formative research and planning necessary for effective supplementation. In addition, few campaign designers have the prerequisite message design skills and knowledge of behavior change methods. Perhaps the biggest barrier to the development of media supplementation is lack of a perceived need for more intensive programs.

Applying theory and using formative research in campaigns

Maccoby and Solomon (1981) identify four additional guidelines for program planning that will help health promotion professionals achieve saturation, targeting and supplementation. These four, setting specific objectives, application of theory, formative research, and program evaluation are described below.

Specifying behavior change-oriented objectives. Change objectives should: (1) be stated in terms of behavior change, (2)

specify a time period, (3) indicate target audiences, (4) define measurable outcomes, and (5) reflect models and theories of behavior change. Taxonomies of media campaign objectives can be found in McGuire's (1981) information processing framework, Roger's (1983) steps for diffusion of innovation, Ray's (1973) hierarchy of effects model, and Farquhar and Maccoby's communication behavior change model (Farquhar, Maccoby & Wood, 1985; Maccoby and Solomon, 1981). Behavior change-oriented objectives include affective (e.g. attitudes and outcome expectations) and cognitive (e.g. knowledge and perceived self-efficacy) changes that are likely to lead to behavior changes. Objectives include both interim behaviors as well as long term health habits (e.g. eating a diet low in cholesterol and fat). Intermediate objectives includes in health awareness, knowledge, attitudes, intentions, and skills.

Application of theory. Theories from communication, social psychology, and public health can inform message content and structure (Bandura, 1986; Fishbein & Ajzen, 1975; Flay, 1981; McGuire, 1981), sequencing of message content (McGuire, 1981), and media channel selection (Schramm, 1982). Yet, few message designers actively integrate theory into the construction of message concepts. Notable exceptions include: (1) Bauman and colleagues (1989) mentioned by Christenson and Roberts, (2) Worden and colleagues in Vermont (1988), (3) McAlister and colleagues in Texas (1988), (4) the Stanford Three Community Study (Farquhar et al., 1977: Maccoby et al., 1977) and (5) the Stanford Five City Project (Farquhar et al., 1985; Flora, Maccoby, & Farquhar, 1989). Theories

such as social cognitive theory, inoculation theory, and theories of normative influences such have shown promise in previous research with adults (Bandura, 1986; Roberts & Maccoby, 1973; Fishbein & Ajzen, 1975). Theory can enhance the effectiveness of messages by guiding the selection of sources, portrayal of health behavior, presentation arguments, process of inoculating against unhealthy messages, selection of message appeals, and reflection of relevant norms.

Formative Research. Formative research includes all data collection activities that can contribute to segmenting audiences, understanding audience needs, and testing messages (Lefebvre & Flora, 1988). Pre-production research includes techniques aimed at familiarizing the message designer with the existing beliefs, desires, and needs of subgroups of the target audience. Audience segmentation and needs analysis are accomplished through the use of surveys, focus groups, and interviews. Post production research--most often message pretesting-- includes gathering information from members of the target audience on draft messages and strategies. Message comprehension, liking, credibility, memory, learning, and behavior change are all important in post production research. One additional benefit of formative research is increased production value. In my own field experience (Flora, Maccoby, & Farquhar, 1989) and that of others (Maccoby & Alexander, 1978), messages that are well produced are more likely to be aired by station managers and PSA directors. Formative research can aid the development of

well produced materials.

Formative research can also be extended into the program implementation process, monitoring message delivery and providing feedback. Finally, formative research also includes increasing the campaign planners knowledge of media channels and understanding of potential media mixes.

Careful analysis of the targeted media channel can yield invaluable information about selection of change strategies. Analysis media channels can include: interviews with station managers and staff, review of history of community involvement, development of personal collegial relations with staff, viewing/listening of target channel, reading materials produced by the station, and coordination with opinion leaders in community to support changes. This channel analysis process can yield an understanding of how stations work, lists of untapped formats within the medium (e.g. community calendars in radio stations, print messages in videos, PSAs on cable TV), identification of benefits and drawbacks of change and understanding media and community needs. This information is the basis for selecting channels, planning media mixes, and determining the outcome objectives of individual media messages.

Program evaluation. Outcome evaluation is critical to improving our understanding of the design and delivery of health promotion programs. It often involves a compromise, as program directors must allocate limited program resources to both the intervention and the evaluation. Specifying outcome objectives,

conducting formative research to determine if the intervention matches the objectives, and monitoring the process of the intervention make program evaluation easier and more efficient. Ultimately, evaluation results are used to determine what worked for whom and why, if scare resources have been used beneficially, and whether future efforts can be improved.

Christenson and Roberts (1989) discuss those campaigns that have used television and radio to influence adolescents -some successful others are not. None in the United States have systematically used other music media such as music videos, compact discs, records, or tapes to promote health. As Christenson and Roberts (1989) point out these media are under-utilized by education and health professionals as channels to reach adolescents. While it is true that there are not always established means for placing messages in many of the music media channels, there are examples of media professionals either on their own, or in response to public outcry, placing health print materials in compact discs (CD) and record packages (for example the placement of printed material on AIDS in a Madonna CD). Presenting a less optimistic view, Katherine Montgomery states in her recent book, Target: Prime Time that ... "these effort (working with cable television to affect programming) are unlikely to be effective in an industry which lacks a tradition of interaction with the public. Since the cable industry is not licensed by the government and has no legal requirement to serve the public interest, cable operators and cable networks have no obligation to listen to the complaints

or concerns of outside groups." It is clear that the development and placement of healthful messages in radio or music media is a major challenge, Each individual channel must be carefully analyzed for its potential to distribute healthful messages. Strategies will of necessity vary by channel and depend on the individual campaign designers creativity, budget, and relations with media gatekeepers. Results of campaign strategies include buying time, using public service time, negotiating cooperative efforts that are mutually beneficial, and using public outcry within the community to leverage space and air-time. Other strategies which attempt to affect the regulations and policies of these industries and are discussed in more detail later.

Influencing adolescent health indirectly

Group Strategies. Families and health/media professionals constitute two especially influences on adolescents health. While there may be other groups and other group strategies, I will elaborate on two important ones, enhancing teens' understanding of media and increasing informational exchanges among professionals.

Critical viewing skills. While enhanced media literacy skills administered through schools, families or in the media may help inoculate adolescents against the pressures of media, these efforts alone do not suffice to ameliorate the effects of unhealthful media. A comprehensive effort which includes efforts to reduce unhealthful advertising and increase healthful programming has a greater likelihood of succeeding at influencing adolescents health

habits.

Programs designed to enhance media literacy, particularly with very young children, have been shown to be effective (Rapaczynski, Singer, & Singer, 1982). Most programs have been conducted in the classroom, with the support of parents and teachers. The most effective programs are tailored to the developmental level of the pupil. With training, children better understand that commercials are not part of the TV story, that commercials are not always truthful, that advertisers are trying to sell you something, that endorsements by famous people does not mean the toy will work forever, and that buying advertised toys will not make others like you better. Critical viewing that encompasses knowledge of types of programs, audio, editing, actors, realistic characters, props, and their effects on viewers/listeners/readers may inoculate children and adolescents against the advertised pressures to smoke cigarettes, drink or misuse alcohol, have unsafe sex, eat unhealthful foods, and strive to look thin.

Knowledge of media influences may help prevent the development of personal norms that reinforce and maintain unhealthy behaviors. For example, many adolescents believe that one-third to one-half of their peers smoke. Yet, depending on the community, this belief is 3 to 5 times higher than the actual adolescent smoking rates. Advertisements on billboards, in magazines, in school newspapers, at sports and other events, and in local retail outlets reinforce the belief of large numbers of young people smoke. Content analysis of magazine advertising since the early 1900's show that the

cigarette industry has increased the amount of advertising targeting youth and women (Altman et al, 1988; Albright et al, 1988; Basil, et al, 1989). Billboard advertising in the city of San Francisco showed a greater density of alcohol and cigarette advertising in black and Latino/Hispanic neighborhoods than in white or Asian neighborhoods. In addition, ads in black and Latino/Hispanic neighborhoods were targeted to members of those communities through the use of black models and cultural/ethnic themes (Schooler et al., 1989). Children and adolescents' need behavioral (verbal) and cognitive skills to inoculate them against the subtle influences of depictions and modeling of unhealthful behavior and the direct influences of advertising.

Most media literacy training has to date taken place primarily through schools. Little is known about the effects of making this training more widely available to children, teens, and parents through cable and public television, video tapes, audio tapes, and computer games and programs. Evidence of a more widespread use of media literacy training is the recent airing of the half hour show "Buy me that: A kids' survival guide to advertising". The show is currently being shown on Home Box Office (HBO). This production and its airing is one attempt at disseminating media literacy concepts. More research is needed to understand the effects of training in different media and additional program development and evaluation is needed before literacy training can be widely disseminated. Media literacy training that is tailored to children and adolescents different ages and disseminated through multiple

channels of communication has the potential to be successful in inoculating against unhealthy influences as well as educating about how media are developed.

Exchange among media, health, and development professionals. A second means of influence for music media is through education of media professionals about adolescents, health, and media. Educational exchange between media, public health and other professionals concerned with the healthfulness of adolescents is critical to the success of any comprehensive effort to bring about change. This exchange can take place in communities, states, and at regional and national meetings. Recently, the Office of Substance Abuse Prevention (OSAP),the National Cancer Institute (NCI), the National Heart Lung and Blood Institute (NHLBI) and others held such an exchange - a conference of media and public health professionals titled "Mass Communication and Public Health." The proceedings have been presented at several national and regional meetings. The papers from the conference will be published as a book early in 1990. This is one example of a carefully planned exchange between opinion leaders in the media and public health[1].

The concrete results of such an exchange can include: (1) education of health professionals about how to create health materials that appeal to station managers and PSA directors, and

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[1] Bob Denniston, Director of Communication at the Office of Substance Abuse Prevention, Rosemary Romano at the U.S. Office of Smoking and Health, and Elaine Arkin, a consultant are key contact people for this conference.

engender interest in mutual planning about health issues, (2) media professionals can more fully understand and appreciate the potentially damaging effects of current media on adolescents, and (3) media professionals can work within their industries to devise ways to work more successfully with health professionals and to produce entertainment that is more conducive to adolescent health. The benefits of exchanges between professionals from different disciplines are the personal relations developed out of mutual concern for the issue. These personal relations are often the means by which major cooperative endeavors to bring about change are begun.

Influencing media and educational institutions

The two types of institutions considered here are the media institutions of concern (radio and music industry) and training institutions for health and media professionals (schools of public health and schools and departments of journalism, advertising and public relations). Three strategies are discussed, influencing media institutions through cooperative consultation and media advocacy and enhancing the training of professionals in universities.

Cooperative consultation. The term cooperative consultation was originated by Warren Breed and James De Foe (1982) to describe their activities aimed at effecting media change in the treatment of alcohol topics. Breed and De Foe (1982), funded by National Institute of Alcohol and Alcohol Abuse, incorporated a series of

activities into the cooperative consultation process. They used personal contacts to form an advisory board. And then made additional contacts with producers, writers, and directors. They then informed television executives and writers about alcohol and drinking behavior, and showed them data from content analyses on the current treatment of alcohol in television entertainment programming. They worked with interested television staff to analyze scripts, rewrite material, and supply specific suggestions about treatment of alcohol.

The cooperative consultation process is a cooperative and collegial process, based on knowledge of the content and mutual agreement to change media content is an direction approved by both parties. This process is distinguished from that of most pressure groups where relationships are adversarial and pressure is placed on media personnel. The cooperative consultation process is predicted to be most effective on relatively noncontroversial and nonpartisan topics where the issue is the means and mode of presentation. A recent example of a similar strategy is the cooperative efforts of public health professionals from the Harvard School of Public Health and creators of entertainment programming (writers) in integrating messages about the selection of a designated driver in many of the new fall 1989 television programs (Variety, 1989). The use of Hollywood lobbyists did not originate with Breed and De Foe (Montgomery, 1989). The Population Institute, and its reorganized form the Center for Population Options, pioneered the strategy of appealing directly to program creators

and set up a West Coast office in 1970. This long history of health advocacy reveals many lessons about how to influence the media industry.

The process of directly appealing to entertainment creators and station gatekeepers can be paralleled in the radio and music industry. Since radio is a more decentralized industry where individual radio stations often have greater control over the creation and airing of content than to TV stations, such cooperative processes may be most effective on a small scale in local communities. The music industry is much more diverse and even less structured than television and radio. In addition, cooperative consultation with industry executives may be a greater challenge in an industry unused to receiving public pressures and responding to public demands (Montgomery, 1989). Appealing to individual entertainment creators may be more effective in an industry that does not generally have "offices of standards and practices." Individuals who work in the entertainment industry are also likely to have children, have concerns about their children's health, and interested in information about the potential influences of media.

Media advocacy. Media advocacy "is the strategic use of mass media for advancing a social or public policy initiative (Pertschuk for NIH, 1988)." Media advocacy is composed of a range of strategies aimed at reframing public debate of issues. These strategies include education of public health professionals in ways to stimulate and achieve media coverage, effective press releases, creative presentation of epidemiological data that matches media's

desire for simple and image-driven information, and appearances on media. While many of these strategies are based on public relation principles, others are new and require specialized training. Some strategies may be controversial among media professionals, such as the emphasis of media advocacy to de-legitimatize the industry by exposing exploitive practices such as "advertising practices which exploit children and place profits before health and safety provide raw materials for the media advocate (Wallack, p.17)."

Media advocacy includes two ways to reframe issues presented in the media. First, professionals are taught to focus attention on industry practices as a primary problem and not the behavior of the individual. Second, students of advocacy training learn to expose industry practices that negatively influence health. Using standard public relations practices of press releases, news conferences, guest appearances, and creating news events, media advocates attempt to reframe health issues away from individual lifestyles and toward a profit driven industry who is unconcerned with the effects of its products on the publics health. A successful example was described by Wallack (1989). "The tobacco industry has carefully crafted an image of themselves as advocates of civil rights, protectors of free speech and good community citizens. Anti-smoking groups were successfully characterized as zealots, health nuts, and health fascists. The industry was very successful at this until recently when anti-smoking activists reframed the issues by stripping the industry of its positive symbols. Tobacco producers became "merchants of death," "hitman in

three-piece suits', and exploiters of youth, women, and minority groups (P17)." This reframing was accomplished by exposing and publicizing ".... tobacco industry ties to cultural events, shaming through public exposure those who accept industry money, and continually making explicit the link between death and tobacco. (P17, 1989)."

Creative epidemiology, another important instrument in the toolkit of the media advocate, is the stimulation of media coverage through provocative data presentation. Data are framed to be interesting for the media and more concrete and meaningful for the public. To portray the numbers of people affected by cardiovascular disease, John W.Farquhar presented the following, " Let us say that from the beginning on January 1, two jumbo jets crash ever day of the year, killing 500 people per day (359 men, 142 women). The average age is 58, with an age range from 30 to 65. At the end of the year the total number of premature deaths from these airplane accidents is 183,000 (p.20, 1978). Creative epidemiology can both stimulate media coverage and, perhaps generate more coverage through the controversy created.

Curricula change in training institutions. A long term strategy for change is to produce health professionals who understand the media industry and are skilled at designing effective information campaigns. Typically, masters of public health students take one or no classes on communication theory and methods, formative research, or campaign design and management. In addition, we need a media industry with journalists who are

sensitive to the potential impact of their mass distributed messages. Journalists and other media professionals rarely take these same communication courses. They are not exposed to course work on media effects, particularly health effects.

While junior level professionals are rarely able to significantly influence industry policy alone. Many junior level professionals become senior level professionals and executives in the industry --health and media. Both health professionals and journalism are professions where many practitioners have completed advanced education, have professional societies, standards committees, and professional pride. This professional pride and desire to enhance society must lead the way for concrete actions to improve the healthfulness of our communications system.

Influencing society to support adolescent health

The third level of influence is the society/community as a whole. One strategy is discussed here, regulation from the Federal or State Government such as the FCC. Palmer (1989) in his recent book titled Television and America's Children: A Crises of Neglect, argues convincingly that we can have reforms in American children's commercial television. It worked in Australia. U.S. broadcasters make special provision for children is already their obligation under the law. Implementation of this requirement is at question.

Over the past few years the communications industry, primarily network television, has convinced powerful political bodies that an economic market place is synonymous with the marketplace of

ideas. As Montgomery states. "While certain segments of the population may be well served as consumers, the public as a whole will not be well served as citizens. If present trends continue, voices in our pluralistic society will be further marginalized, circumscribed or excluded (p. 224, 1989)." Public advocacy efforts began in the sixties and since that time the story of their efforts is one of limited success in the face of the continued distancing of the U.S. communications system from public accessibility and accountability. I cannot state it stronger or more convincingly than Katherine Montgomery. "If we are to have a communications system that fully serves the needs of American democracy, media policy will need to be placed high on the public agenda (p. 224, 1989)."

Research implications

Research including on the development of interventions, evaluation of critical viewing training programs, effectiveness media industry influence strategies, and influences of educational endeavors is needed.

Studies of the nature of adolescents media use, such as descriptive cross sectional and longitudinal survey research to investigate frequency of use, contexts of use, gratifications, and characteristics of users are long over due. An indepth understanding of adolescents media habits is a perquisite to the development of media-based interventions.

Investigation of message influence and design, including laboratory experimental research and applied field are needed. Studies which examine the influences of medium, music, words, content, and context (healthy and unhealthy) on attention, memory, learning, attitudes, and health behavior improves our understanding of media and adolescent health habits. Field research on the use radio, cable TV, and music to influence health behaviors such as prevention of teen pregnancy, preventing STD's, substance abuse prevention, healthy diets, enhanced body image, and physical exercise are currently limited.

Experimental and field research on alternative influence strategies such as educating listeners about critical viewing/listening through family interventions, schools, and media are needed before these strategies are widely disseminated.

Evaluation research on the effects of cooperative consultation (Breed & Defoe, 1982), media advocacy (Pertschuk, 1988; Wallack, 1989), professional education and exchange among industry, public health, and local media professionals (Dessart, 1989), and regulation is in scarce supply.

Systematic nonexperimental survey research, applied field research, and experimental laboratory research investigating the influences of media on adolescent health are needed to prepare professionals for program development, advocacy, and campaign design.

Table 1
Strategies to enhance the adolescent health through the media

Individual targets

1. Health promotion campaigns aimed at modifying adolescents' knowledge, behavior, and values, including PSAs, programs, events, printed materials in newspapers and magazines as well as among music media materials (e.g. inserts in records, CDs, videos).

Group targets
(Families, peer networks, health professionals)

2. Critical viewing materials for families.
3. Exchange among media, health, adolescent development professionals about health issues.

Institutional targets
(Media institutions, health, media and
other professional training institutions)

5. Cooperative consultation between media industry executive and entertainment creators.
6. Media Advocacy, application of strategies designed to help health professionals work more effectively with the media.
7. Curricula development for health, journalism, and other media related professional training programs.

Society

8. Regulation of the U.S. communications system to facilitate/enhance healthy adolescent development.

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